

Computers and Internet
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The Internet is our Enemy. After all, it is so much better (and less expensive) than anything as quaint and old-fashioned as (gasp!) Radio. Clearly, it spells the doom of Amateur Radio as we know it. Believe it?

Sorry, I just don't buy into that idea, but you'd be surprised at how many Hams feel this way. These Hams see the Internet as competition to Amateur Radio, a faster/better/cheaper messaging system that anyone with a little bit of equipment - no test required - can use.

The reality is, the Internet is nothing more than a tool. Like all tools, the results one gets depends upon knowing the tool's capabilities and how to use it. We're going to take a look at the Internet from this point of view - as a tool - and have a look at some of the ways we can use it to enhance our Amateur Radio operating.

As a guess, I estimate that over 90% of you who are reading these words own a computer capable of connecting to the Internet. For the other 10%, you need to know that a 100 MHz Pentium PC can be had for nearly free these days, and you can get an awful lot of connect time for well under \$20 per month. The point is, if you can figure out how to program the memory in your new HT, or know how to neutralize a pair of 6146s, then you need not be afraid of using the Internet. Just like a typewriter, it is just another tool, and a very useful and inexpensive one, at that.

I received an e-mail message from Peter Dillon, JY9NE/N3FNE giving a few examples of how he uses the Internet. Living in Amman, Jordan, he finds that he is a little bit 'off the beaten path' when it comes to Hamming. He subscribes to a number of e-mail reflectors to set schedules, post his operating times, ask questions about equipment, and to discuss operating procedures. He is an active member of 10-10 International and the 6 meter club, and uses their reflectors to keep in touch with other club members. For example, he often posts a quick message to the reflector just before he goes on the air, allowing others to work a JY station. Peter also finds that he saves a small fortune in postage by making use of e-mail and web sites to apply for certificates and contest awards, renew memberships, and verify QSL information with other stations.

DX is a popular pastime for Peter, so he subscribes to the ARRL DX List and 425DX News to keep up to date on DX operations, DXpeditions, and QSL routes. He also makes considerable use of the various callsign servers, his favorite being KD4UJK's DX Info page, which carries a variety of foreign callbooks in addition to the online versions of the Buckmaster and QRZ callbooks. Since Jordan has no packet network, Peter uses the DX Summit web page to see DX Spots. Of course, on-line propagation forecasts are quite useful as well.

Ham-related software abounds on the Internet, and Peter makes good use of what's out there - Azimuth software, grid generators, grid maps, 10-10 logging software, not to mention the PSK31 software. It also gives him a chance to download other shareware utilities, try them out, and even send in his registration fee using a credit card.

The big buzzword these days is e-commerce. This is a catch-all phrase for doing business over the Internet. A quick look at the display ads in *CQ* shows that nearly 90% of the companies have a web site. These range from a simple few pages of information to a complete catalog and on-line ordering system. For example, after reading Benson Smith, KA4LBE's excellent article in the July 2000 issue of *CQ*, "Identify that unknown feedline", I decided that it would be nice to have an antenna analyzer. After visiting a few sites, I ended up at the MFJ Enterprises web site, where I found the MFJ-259B. I read all about it, looked at the other models available, and decided it was just what I wanted. I haven't bought it yet, but once I'm ready, I'll probably go somewhere like Ham Radio Outlet's web site.

By the way, a new feature at *CQ*'s web site is a table of links to advertiser's web sites. This handy new feature will help you get the information and equipment you want, fast.

While I live near New York City, where we have a few ham radio stores, there are plenty of folks who live at least a few hour's drive from anything bigger than a Radio Shack. For these folks, mail-order has become a way of life. Well, the Web has taken mail order to a new and better level, with so much information available, the biggest problem is finding it. (By the way, the Radio Shack Unlimited catalog service has really expanded the range of stuff you can get from them. If you have not looked through their RSU catalog lately, you will be very surprised at what they sell - everything from Rohn towers to Belden Coax).

On the topic of finding things, I have found that the various search engines each tend to find different things, so it is well worth your while to perform a search using as many search engines as you can. While you'll tend to find popular subjects (such as Coaxial Cable) fairly easily, some of the more obscure topics (Tube Neutralization techniques) might take a little searching. For a neat experiment, try searching for your own callsign on at least a half-dozen search engines. I found a FlexNet article I had written years ago, translated into Russian!

As a homebrewer and experimenter, I used to be a catalog junkie, saving every catalog I could get my hands on. Whether for equipment, retail outlets, or components, my catalog collection served as a ready reference for specifications, ideas, and prices. Not too long ago, I recycled most of my collection, after coming to the realization that it's all posted on the web somewhere. For instance, when I needed the exact dimensions of a right angle 9-pin sub-D connector for a PC Board I was designing, I used to turn to my trusty Digi-Key catalog. Now, I find it more convenient to just log onto their web site and view the appropriate catalog page. I get my information without having to search through the basement for the catalog and then (finding it) sneeze as my dust allergies kick in - I even get to help the environment a little bit by not using any paper.

Late last year, I heard about a new way to operate HF - via the Internet. Keith Lamonica, W7DXX managed to connect a Kachina 505DSP transceiver to the Web, letting anyone with a license operate from Keith's Boston QTH. The software for this ambitious project was written by Bob Arnold, N2JEU.

After logging on to the W7DXX Remote web site, the operator can select the frequency, mode, power level - even switch in the ACOM2000 amplifier and rotate the Cushcraft beam. For those who just want to listen, in real time, what conditions sound like up in Boston, there is a RealAudio feed. If you want to transmit, you first need to get a password, via the automated password server, and then log in to the remote base via Microsoft NetMeeting. This system helps ensure that only one person is operating the remote at any given moment. With over 300 remote operators registered with the system, from over 65 countries, access needs to be tightly controlled.

One fun use for this system is listening to your own station. The RealAudio feed serves as a great way to really hear what your signal sounds like from afar. Two hams from JA can work each other, and have it really be a DX contact!

For the future, Keith has plans for a second remote base, this one on 2 meters. This should prove interesting, as there is a lot of activity on this band in New England.

Last year, I wrote a column for *CQ-VHF* about the volume and depth of information available through the Special Interest Groups (SIGs) at Tucson Amateur Packet Radio (TAPR). These SIGs consist of e-mail reflectors, message archives, and software libraries, mostly having to do with packet and other data modes. Of course, TAPR doesn't have a monopoly on these kinds of resources - for example, check out the extensive list of mailing lists on QTH.net, for topics as varied as Amateur Radio itself. Similar in operation are the Newsgroups, best described as a BBS (Bulletin Board Service) devoted to fairly narrow subject areas. These are accessed through your e-mail program, by first subscribing to the newsgroups that interest you (there are tens of thousands), and then browsing the recently posted messages every so often.

No matter what kind of information you seek - equipment and component specifications and prices, facts about a place or person, folks with similar interests, clubs, contests, DX spots, even a study guide for the new Extra class exam - You will find that the Internet is as varied as the entire planet, and, since Hams tend to be 'early adopters' of technology, a greater percentage of the stuff out there is of interest to Hams.

So, what can you do on the Internet to enhance your Amateur operations? Although I've only barely touched on the possibilities, the question really should be, what can't you do? Well, emergency traffic when the phone lines are down, and real-time random QSOs are two things you generally cannot do on the Internet, but hey, that's what Radios are for, right?

I have to admit that I'm not a tester, but after my recent upgrade to a 5 WPM General (and damned proud of it!), I decided that I should perhaps give it a try. It quickly became apparent that I needed some logging software. So, I asked around, and found that testers tend to feel very strongly about their logging software. For the last column of the year, I plan on taking a look at what's available out there, and let you draw your own conclusions. until then, 73 de N2IRZ.

Captions:

Figure 1: The W7DXX Remote Base control panel. This is what you see as you operate the remote base, with the ability to control all aspects of the Kachina 505DSP radio, as well as the ACOM2000 amplifier and the rotator for the Cushcraft beam.

W7DXX Remote Base

[Apply](#) for your own password.
You will need to [Download](#) NetMeeting

Transmitter Status: Transmitter Disabled - No Transmit access for this login name.

System Information: Access Disabled - Only page updates are available. Altering any of the entries will not work.

User Status: ^luserstat^

Note: select AUTO mode to have the system select the proper SSB mode depending on the frequency.

Leave the Frequency entry blank to update the page without changing the frequency or other parameters.

Enter the Frequency(kHz):	<input type="text" value="14275"/>	Fine Tune(+/-Hz):	<input type="text" value="0"/>		
Select mode and bandwidth:	<input type="text" value="USB - 2.7k"/>	RX Preamp:	<input type="text" value="On"/>	RX Atten:	<input type="text" value="Off"/>
AGC Speed:	<input type="text" value="Fast"/>	Noise reduction:	<input type="text" value="Off"/>	Noise Reduction Level:	<input type="text" value="Low"/>
Antenna port:	<input type="text" value="Cushcraft 20-10 Beam"/>	Enter antenna bearing(0 to 359 degrees):	<input type="text" value="270"/>		
Enter TX Power (1 to 100 watts):	<input type="text" value="100"/>	External Amplifier:	<input type="text" value="Off"/>		
External relay 1:	<input type="text" value="OFF"/>	Phased array direction:	<input type="text" value="80/40 Phased Array = South West"/>		
<input type="button" value="Click Here To Send Changes"/>					

The effective frequency range is 500 Khz to 29999.999 Khz. FM mode is not available.

Logged in: GUEST - Last User: W7DXX

From IP Address: 24.218.68.209

Last frequency change on: 04/07/00 21:40:44

Current date and time: 04/07/00 23:15:42

The frequency currently is: 14275 kilohertz with a mode setting of USB - 2.7k.

The receiver preamp is On. The receiver attenuator is Off.

The AGC speed is set at Fast. The receiver noise reduction is Off and is set at Low.

The current antenna is Cushcraft 20-10 Beam. The transmitter is set for 100 watts.

Did you have any problems? Send email to: W7DXX@LAMONICA.COM.

Figure 2: A NASA web page featuring the International Space Station, soon to be the highest shack in the sky.



Curator: [Kim Dismukes](#) | Responsible NASA Official: [Kelly Humphries](#) | Updated 06/30/2000
What you should know about the [NASA Web Policy](#)



Internet Resources:

(This is a list of web sites used in the preparation of this column. Also look in the Advertiser's Index at the back of this issue, and the CQ website, for the web sites of our advertisers and other useful links)

CQ Magazine: <<http://www.cq-amateur-radio.com>>
425DX News: <<http://www.425dxn.org>>
ACOM: <<http://www.hfpower.com>>
Alinco electronics: <<http://www.alinco.com>>
American Radio Relay League: <<http://www.arrl.com>>
Buckmaster Publishing: <<http://buck.com>>
Cushcraft: <<http://www.cushcraft.com>>
Digi-Key: <<http://www.digikey.com>>
DX Summit web page: <<http://oh2aq.kolumbus.com/dxs>>
Ham Radio Outlet: <<http://www.hamradio.com>>
Icom America: <<http://www.icomamerica.com>>
Kachina Communications: <<http://www.kachina-az.com>>
KD4UJK's DX Info page: <<http://users.southeast.net/~kd4ujk1/dxqslge.htm>>
Kenwood USA: <<http://www.kenwood.net>>
MFJ Enterprises: <<http://www.mfjenterprises.com>>
PSK31: <<http://www.kender.es/~edu/psk31.html>>
QTH.Net: <<http://www.qth.net>>
QRZ Callbook server: <<http://www.qrz.com>>
Radio Shack: <<http://www.radioshack.com>>
Six meter club: <<http://www.6mt.com>>
Ten-Ten International Home Page: <http://www>
Timewave/AEA: <<http://www.timewave.com>>
Tucson Amateur Packet Radio: <<http://www.tapr.org>>
UK 6 metre group: <<http://www.uksmg.org>>
W7DXX Remote Base: <<http://www.lamonica.com>>
Win1010 log software: <<http://www.hds.net>>
Yaesu Electronics: <<http://www.yaesu.com>>